

IN THE CLAIMS:

*Entered per RCF
filed 4/9/04
cla 6/30/04*

1 Claim 1 (Currently Amended): A manufacturing method for a single crystal of calcium fluoride, having its optical properties improved through an annealing process comprising the steps of:

providing a single crystal of calcium fluoride in a sealable container, sealing said sealable container, then

heating said sealable container with a heater arranged external to said container such that a temperature inside said sealable container is raised to a first temperature, which is lower than a melting point of said single crystal of calcium fluoride,

maintaining the temperature inside said sealable container at said first temperature for a designated period of time, and

lowering the temperature inside said sealable container to ~~room~~ a second temperature at a first rate, and lowering the temperature inside said sealable container from the second temperature at a second rate, wherein the step of lowering the temperature comprises:

~~decreasing the temperature inside said container to a second temperature, which is in the range of around 600 °C to 900 °C at a rate of 2 °C/hour or less, and then~~

~~decreasing the temperature inside said container from said second temperature to room temperature;~~

wherein said first rate is 2°C/hour or less, said second rate is 3°C/hour or less, the first rate is lower than the second rate, the first temperature is between 1020 °C to 1150°C, and the second temperature is between 600°C to 900°C.